Vale District Bureau of Land Management
Shell Bark Spring / Oxyoke Spring
Reconstruction and Enclosure Fencing
Nyssa Allotment (10403)
Environmental Assessment
EA No. OR-030-02-005

Decision Record

This Decision Record documents my decision to select the proposed alternative to reconstruct Shellbark and Oxyoke springs with redevelopment of the spring source as needed, construction of livestock exclusion fencing around associated riparian vegetation communities within Sagebrush and Grassy Mountain pastures, and trough relocation, including needed piping of water, to appropriate down-slope locations. This action was analyzed in the attached Environmental Assessment (EA OR-030-02-005). This proposed action is tiered to and is consistent with the Northern Malheur Management Framework Plan dated March 1983, the Southern Malheur Rangeland Program Summary dated January 1984, the Malheur County Land Use Plan, and BLM policy. Additionally, it is consistent with the proposed alternative of the Proposed Southeastern Oregon Resource Management Plan and Final Environmental Impact Statement dated April 2001. The following mitigation measures will be implemented to minimize negative impacts to public land resource values:

- All equipment used to reconstruct the spring box, install troughs, and to lay proposed pipeline would be power-washed prior to movement to the project site to avoid introduction of undesired and noxious weed species.
- In accordance with guidance provided in BLM Technical Reference 1737-17, "A Guide to Managing, Restoring, and Conserving Springs in the Western United States" and the Proposed Southeastern Oregon Resource Management Plan and Final Environmental Impact Statement, any reconstruction of water collecting facilities at Hobo Spring would not attempt to dewater the spring source, but provide for some water to continue to naturally flow on the surface and subsurface to maintain proper hydrologic function.

My decision is to authorize redevelopment of Shellbark and Oxyoke springs as above and reassign maintenance of the redesigned rangeland project to livestock operators authorized to graze livestock in Nyssa Allotment by way of a cooperative agreement.

/s/ Tom Dabbs
Tom Dabbs
Field Manager
Malheur Resource Area

05-13-2003
Date

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Finding of No Significant Impact

The Malheur Resource Area of the Bureau of Land Management, Vale District has analyzed a proposal to reconstruct Shellbark and Oxyoke springs with redevelopment of the spring source as needed, construction of livestock exclusion fencing around associated riparian vegetation communities within Sagebrush and Grassy Mountain pastures, and trough relocation. The analysis included a no action alternative. Based on the following summary of consequences and as discussed in the environmental assessment, I have determined that implementation of the proposed action will continue to meet resource management objectives defined in the Northern Malheur Management Framework Plan and the Southern Malheur Rangeland Program Summary, both of which constitute the land use plan for Malheur Resource Area. Impacts to riparian vegetation communities, and thus riparian function, would be reduced with livestock exclusion from the spring sources and riparian vegetation communities down-stream. The availability of quality livestock water would also be improved with spring reconstruction as compared to the current livestock watering from the spring sources and streams.

Impacts to critical elements of the human environment, including ten points of potential significance identified in 40 CFR 1508.27(b), are not determined to be in excess of limits requiring the development of an environmental impact statement. Negative impacts to desired perennial vegetation communities and thus watershed stability are not anticipated to increase with the proposed action. Additionally, exclusion of livestock from springs and associated riparian communities is consistent with the resource management direction proposed in the soon to be completed Southeastern Oregon Resource Management Plan.

As a result, on the basis of the information contained in this environmental assessment and all other information available, it is my determination that the proposed action does not constitute a major federal action significantly affecting the quality of the human environment and that an environmental impact statement is not required.

/s/ Tom Dabbs
Tom Dabbs
Field Manager
Malheur Resource Area

04-15-2003
Date

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1 Purpose of and Need for Action

Standards for Rangeland Health and Guidelines for Grazing Management (S&G) were incorporated in revisions to Federal grazing regulations (43 CFR 4180) in 1995. The Vale District strategy for S&G implementation, as described in a letter to livestock operators and interested publics dated March 3, 1999, was to group allotments in geographic areas to prioritize data collection followed by analysis and determination of conformance with those standards and guidelines based on resource issues such as land health, resources at risk, threatened and endangered species, special management areas, and social/political issues. As identified in that letter, Nyssa Allotment (Figure 1) was scheduled for the start of assessment in 2000 as part of the Dry Creek Geographic Management Area (GMA). Subsequent delays in implementing this strategy have postponed that start until 2002 with data collection to continue through the 2003 field season and subsequent assessment of S&G's and allotment evaluation beginning in 2004. Implementation of necessary actions to address noncompliance with S&G's would begin in 2005.

With increasing interest in appropriate management of riparian communities, in addition to management of all public land resources in accordance with S&G's, Jeff Hess and Gary Cleaver, two livestock operators authorized to graze cattle in Nyssa Allotment, requested that the spring sources and down-stream riparian vegetation communities at Shellbark (JDR 0066) and Oxyoke (JDR 1745) springs be better protected from livestock impacts by exclusion fencing. Associated with exclusion fencing, they requested that the current spring developments be reconstructed to pipe water to troughs placed outside riparian vegetation communities. Shellbark Spring was constructed in 1943 with a spring box placement on a seep adjacent to Lone Willow Creek and trough placement approximately 70 yards down-slope and on a bench adjacent to the stream. Similarly, Oxyoke Spring was constructed in 1967 with a spring box placed in an unnamed drainage and trough placed approximately 30 yards down-slope in the drainage. This EA is the analysis of those proposals.

Spring redevelopment/reconstruction with livestock water trough placement outside the location of priority resources, as well as livestock exclusion fencing to protect priority resources, are fully consistent with decisions in the Northern Malheur Management Framework Plan (MFP) dated March 14, 1983, the Southern Malheur Rangeland Program Summary (RPS) dated January 1984, the Malheur County Land Use Plan, and BLM policy. Management direction provided in the current land use plan, the MFP, as well as that proposed in the BLM's effort to update land use planning for Vale District (the Proposed Southeastern Oregon Resource Management Plan/Final EIS dated April 2001), include management of riparian communities to attain proper functioning condition as well as meeting additional upland rangeland, wildlife, fisheries, aquatic, and water quality objectives.

The BLM considered postponing a response to the requests to reconstruct Shellbark and Oxyoke springs with exclusion fencing and trough relocation until completion of S & G's and allotment evaluation scheduled for 2004. Based on preliminary analysis, it was determined that potential benefits to riparian resources, primarily adjacent to these two springs, and the opportunity to implement beneficial actions cooperatively with livestock operators and interested publics, warranted complete analysis and a decision outside the established GMA process. Potential benefits included those to a number of riparian related resources including special status fish, special status amphibians, administratively suitable WSR, and proposed ACEC. Consideration of this request is not intended to replace S & G assessment nor allotment evaluations as scheduled. Upon completion of those assessments and evaluations, activity plans would be adjusted as found appropriate to meet S & G's and resource management objectives defined in the land use plan.

Possible decisions to be made as a result of information provided in this environmental assessment include the types of actions which would be implemented to protect riparian resources at Shellbark Spring and/or Oxyoke Spring, including whether to redevelop/reconstruct Shellbark Spring and/or Oxyoke Spring, construct permanent fencing to exclude livestock from riparian resources, and relocate troughs outside

exclusion areas by extending pipelines. No other federal, state or local government is involved in the NEPA analysis of the proposed actions, beyond issue identification, review, and comment on content of the draft document.

Internal scoping of issues relevant to the proposed action identified the need to ensure livestock management actions implemented did not impair meeting riparian, upland vegetation, watershed, special status species, and cultural resource management objectives presented in the land use plan. The level of controversy of livestock management actions implemented in Nyssa Allotment is moderate with one national environmental organization requesting to be informed of proposed changes. Additionally, the Oregon Department of Fish and Wildlife is typically informed of proposed livestock management changes as is the Malheur County Court. Memoranda of Understanding between BLM and a number of Tribes (the Burns Paiute Tribe and the Confederated Tribes of the Umatilla Reservation) are in place to define coordination.

The proposed actions implemented to protect riparian resources at Shellbark and/or Oxyoke springs would be implemented with necessary revisions to the cooperative agreements for the maintenance of rangeland projects (form 4120-6).

2 Alternatives Including the Proposed Action

This section describes the proposed action and the no action alternative. Alternatives to limit grazing use in Sagebrush and Grassy Mountain to spring only or to exclude livestock use in these pastures to protect riparian communities at Shellbark and Oxyoke springs were considered but not analyzed as described in section.2.3.

2.1 Proposed Action

The existing spring development at Shellbark Spring would be reconstructed to collect water at the spring source (T.21S., R.44E., section 13 SESE) and transport it by buried pipeline to a trough located outside riparian vegetation communities (T.21S., R.45E., section 19 NWNW) as depicted in Figure 2. Overflow from the relocated trough would be returned to the stream channel, thereby not creating a new channel nor rerouting water. Livestock would be excluded from approximately 0.75 miles of riparian vegetation communities adjacent to Lone Willow Creek and an estimated 250 acres of public land with the construction of approximately 1.25 miles of permanent 4-strand wire fence. Some soils movement, to relocate the existing two-track road on the south side of Lone Willow Creek, may be necessary to maintain access for vehicles along approximately one-eighth mile of the fence constructed to exclude livestock from riparian communities. The grazing schedule within Sagebrush Pasture would be retained as defined in the 1999 Nyssa Allotment Management Plan, use after July 1 annually.

Similarly, the existing spring development at Oxyoke Spring would be reconstructed to collect water at the spring source (T.22S., R.44E., section 33 NWNW) and transport it by buried pipeline to a trough located outside riparian vegetation communities (T.22S., R.44E., section 33 NENW) as depicted in Figure 3. Livestock would be excluded from approximately 20 meters of riparian vegetation communities adjacent to an unnamed drainage and an estimated 2 acres with the construction of approximately 0.2 miles of permanent 4_strand wire fence. The grazing schedule within Grassy Mountain Pasture would be retained as defined in the 1999 Nyssa Allotment Management Plan, use after July 1 annually.

2.2 No Action Alternative

Spring developments at Shellbark and Oxyoke springs would be maintained as constructed in 1943 and 1968. Livestock would retain access to riparian vegetation communities associated with Shellbark and Oxyoke springs during scheduled grazing use after July 1 annually.

2.3 Alternatives Considered Although not Analyzed

The Bureau did not develop additional alternatives beyond the proposed action and the no action alternatives. Alternatives to limit grazing use in Sagebrush and Grassy Mountain to spring only or to exclude livestock use in these pastures to protect riparian communities at Shellbark and Oxyoke springs were considered but not analyzed. An allotment management plan grazing rotation which implements late summer use of these two pastures was implemented in 1999. This planned schedule considered all known resource values in Nyssa Allotment. Disruption of this schedule to meet localized riparian needs would complicate analysis, including many more uncertain impacts. Additionally, it could cause similar riparian impact problems with possible proposed changes to mid-summer use of other pastures. Thus available alternatives were limited to authorizing the request with appropriate mitigation actions or maintaining the existing situation with livestock access to spring sources. Other alternatives to implement additional management actions to meet objectives, including those to improve or maintain suitable riparian vegetation communities, will be considered when assessment of rangeland S&G's is completed in the near future.

3 Affected Environment

This section presents relevant resource components of the existing environment, that is the baseline environment.

3.1 Vegetation, Soils and Watershed

Vegetation in Nyssa Allotment consists of shrub steppe plant communities dominated by sagebrush species and bunchgrasses. The vegetation type which covers the majority of the allotments is dominated by Wyoming big sagebrush (*Artemisia tridentata ssp wyomingensis*) with an understory of perennial grass species, primarily bluebunch wheatgrass (*Pseudorogneria spicata*), Sandberg bluegrass (*Poa secunda*), Thurber's needlegrass (*Stipa thurberiana*), basin wildrye (*Leymus cinereus*) and localized areas of cheatgrass (*Bromus tectorum*). Depleted rangelands within three pastures were seeded to adapted nonnative species, primarily crested wheatgrass (*Agropyron cristatum*) and now have varying levels of sagebrush reestablishment. Microbiotic crusts composed of cyanobacteria, green algae, lichens, mosses, microfungi, and other bacteria occupy many open spaces between higher plants and provide benefits as identified in BLM technical reference, "Biological Soil Crusts: Ecology and Management".

The soils found in the area near the Shellbark Spring Exclosure were surveyed and described in Oregon's Long Range Requirements for Water 1969, I-11 Owyhee Drainage Basin. The major soils found in the area are listed below.

Unit 55 soils are shallow, loamy, well drained soils with cemented pans. These soils occur on very extensive to moderately steep old fans and high terrace remnants. Native vegetation consists mostly of big sagebrush, low sagebrush, rabbitbrush, budsage, Atriplex spp., needlegrass, squirreltail grass, and Sandberg bluegrass. These soils occur on 3 to 7% slopes.

Unit 76 soils are shallow, clayey, very stony, well drained soils over basalt, rhyolite, or welded tuff. These soils occur on gently undulating to rolling lava plateaus and some very steep faulted and dissected terrain. Native vegetation consists mostly of big sagebrush, low sagebrush, bluebunch wheatgrass, and Sandberg bluegrass. These soils occur on 12 to 20% slopes.

Unit 77 soils are very shallow, very stony, rocky, well-drained soils over basalt, rhyolite, or welded tuff. These soils occur on gently undulating to rolling lava plateaus. Native vegetation consists mostly of big sagebrush, low sagebrush, and Sandberg bluegrass. These soils occur on 12 to 20% slopes.

Unit 94 is a miscellaneous land unit consisting of gently sloping to moderately steep raw old lake sediments where active erosion has prevented soil formation. Vegetative cover is very sparse. These soils occur on 22 to >60% slopes.

Unit 96 is a miscellaneous land unit called Rock Land. It consists of rough, steeply sloping areas that are predominantly shallow, very stony soils interspersed with rock outcroppings. Steep Rock land occurs mainly as canyons and escarpments along margins and dissected portions of lava plateaus. These soils occur on 22 to >60% slopes.

The soils found in the area near the Oxyoke Spring Exclosure were surveyed and described in Oregon's Long Range Requirements for Water 1969, I-11 Owyhee Drainage Basin. The major soils found in the area are listed below.

The area has Unit 60 soils that are moderately fine textured, well drained soils underlain by old lacustrine sediments. They occur on gently sloping to hilly uplands mainly in conjunction with Unit 98 soils. Native vegetation consists mostly of big sagebrush, rabbitbrush, bluebunch wheatgrass, and Sandberg bluegrass. These soils occur on 12 to >60% slopes.

Unit 98 is a miscellaneous land unit that makes up approximately 50% of the burned area. It consists of highly eroded and dissected raw old lacustrine sediments occurring as "badlands" often on slopes steeper than 60 percent. These soils occur on 12 to >60% slopes.

Watersheds within Nyssa Allotment drain north to Malheur River in the Lower Malheur River subbasin (17050117) and east to Owyhee River in the Lower Owyhee River subbasin (17050110). Both subbasins drain into the Snake River and subsequently to the Columbia River.

3.2 Special Status Plants

No plant species listed or proposed for listing under the Endangered Species Act of 1973 are known to be present within Nyssa Allotment. Habitats known to support special status plant species within Nyssa Allotment include a number of sandy soil sites in North and South Mud Springs Seeding pastures and a few sites in Rock Creek Riparian Stream Exclosure (Owyhee River) pastures where Malheur forget_me_not (*Hackelia cronquistii*) and/or Mulford's milkvetch (*Astragalus mulfordiae*) are present. A number of sites of Biddle's lupine (*Lupinus biddlei*) and Cusick's chaenactis (*Chaenactis cusickii*) are known to be located in Ryefield Seeding, Grassy Seeding, and Grassy Mountain pastures.

3.3 Noxious Weeds

Perennial pepperweed (*Lepidium latifolium*) and saltcedar (*Tamarix ramosissima*), aggressive, long-lived perennials, are present in a number of intermittent, interrupted and perennial tributaries and associated seeps which drain to the Owyhee River. Scotch thistle (*Onopordum acanthium*), an aggressive biennial, dominates a small acreage at a number of locations within the allotment. Whitetop or hoary cress (*Cardaria spp.*), another perennial noxious weed is also present, especially adjacent to roads and other routes of seed distribution. Medusahead (*Taeniatherum caput_medusae*), an aggressive annual grass, is present at limited sites with clay layers present in the soil. Rush Skeleton weed (*Chondrilla juncea*) has also been recently discovered in North Mud Spring Seeding. Noxious weed distribution in the allotment is more significant at lower elevation adjacent to cultivated lands and areas of greater historical livestock impacts. Noxious weed presence is sparse in areas dominated by healthy perennial species.

3.4 Livestock Grazing

Nyssa Allotment is located approximately 20 miles south of Vale, Oregon (figure 1), and is part of the Harper Basin Management Unit. Boundaries of the allotment are approximately defined by Dry Creek to the south, Cow Hollow and the Twin Springs Road to the west and north, and Owyhee River to the east.

All allotments within Harper Basin Management Unit (0400) were classified as "I" (Improve) category allotments for management in the January1984 Southern Malheur Rangeland Program Summary (RPS). By agreement, Harper Basin Management Unit was divided to form separate allotments in 1984. Nyssa Allotment remained an "M" allotment at the time of allotment division of the Harper Basin Management

Unit, as documented in the 1986 Northern Malheur Rangeland Program Summary Update. Livestock grazing authorization within Harper Basin Management Unit was set at 38,539 AUMs within the RPS. Livestock grazing authorization within Nyssa Allotment was set at 5,434 AUMs by the allotment division agreement. No grazing authorization for use in Nyssa Allotment is currently held in suspension. Preference to graze livestock within the community allotment is shared by the following operators:

Livestock operator	Authorized Active Use	Season of Use
Frank Shirts Jr	534 AUMs	4/1 to 5/4 (sheep)
Jeff Hess	1,617AUMs	4/1 to 10/31 (cattle)
Christian and Ann Bennight	1,120 AUMs	4/1 to 10/31 (cattle)
Vernon and Velma Widmer	350 AUMs	4/1 to 10/31 (cattle)
Adah Schweizer	70 AUMs	4/1 to 10/31 (cattle)
Gary Cleaver	2191 AUMs	4/1 to 10/31 (cattle)

Permitted use for all cattle operators, as defined in the 1999 allotment management plan, includes flexibility to extend use to 11/30 with reduced use during the growing season

The 76,955 acre community allotment (76,175 acres managed by BLM and BOR) is currently divided into eight pastures with planned grazing defined in the AMP. A number of small enclosures/exclosures and one custodially managed pasture are also present. Pastures used by livestock are as follow:

- North Mud Spring 5,322 acres
- South Mud Spring 3,067 acres
- North Rock Creek 8,152 acres
- South Rock Creek 7,318 acres
- Sagebrush 12,175 acres
- Ryefield Seeding 3,752 acres
- Grassy Seeding 2,971 acres
- Grassy Mountain 30,369 acres

Shortly after division of the Harper Basin Management Unit in 1984, an allotment management plan (AMP) was developed and implemented for Nyssa Allotment. That AMP was revised in 1999 to implement recommendations from a 1994 allotment evaluation. Grazing by cattle was divided into two areas-of-use. Sheep grazing authorization held by Frank Shirts was also addressed in the AMP.

3.5 Wildlife

Nyssa Allotment includes year-long and summer only range for mule deer and pronghorn antelope. Elk also make incidental winter use. Other wildlife species found in the area include neotropical migratory song birds, small mammals and reptiles.

No known wildlife species listed as threatened or endangered under the Endangered Species Act of 1973 are present within or adjacent to Nyssa Allotment. Bureau Sensitive, Assessment and Tracking species include western toad, feruginous hawk, loggerhead shrike, western burrowing owl, western sage grouse, pygmy rabbit, desert horned lizard, Mohave black-collared lizard, and northern sagebrush lizard. Little information is currently available on numbers and distribution of these species within the allotment.

Habitats within Nyssa Allotment supporting sage grouse include those supporting leks, nesting and brood rearing. Sage grouse may be seasonally present in a number of the pastures with known lek sites near Freezeout Lake, 3 miles west of the allotment boundary and Kane Springs, 6 miles west of the allotment boundary, There is no information on winter use areas by sage grouse.

3.6 Fisheries and Aquatic Species

Redband/rainbow trout (*Oncorhynchus mykiss ssp*) occur in the upper reaches of Dry Creek (ten miles west of the allotment), where pools and lower water temperatures provide some refuge through most of the year. Genetic analysis of Dry Creek trout in 1996 showed that redband trout alleles were dominant in this population but with some coastal rainbow introgression.

Columbia spotted frogs, a federal Candidate species, are also present in Dry Creek with their greatest concentration upstream of the Twin Spring Road crossing.

No known special status fisheries or aquatic species are present within Nyssa Allotment.

3.7 Recreation and Visual Resources

Dispersed outdoor recreation in and near Nyssa Allotment consists primarily of occasional off highway vehicle use within designated open areas, rock hounding, and the hunting of upland birds and big game animals. Some dispersed general sightseeing occurs. Shellbark and Oxyoke spring developments are located within visual resource management (VRM) Class IV areas. The objective of Class IV areas is to provide for management activities that require major modification of the landscape. These management activities may dominate the view and become the focus of viewer attention. However, every effort should be made to minimize the impact of these projects by carefully locating activities, minimizing disturbance, and designing the projects to conform to the characteristic landscape.

3.8 Cultural Resources

Pre-European contact Native American peoples were extremely well adapted to their environment. The subsistence economy was strongly oriented toward gathering and collecting because plant foods were more abundant and dependable than fowl, fish or mammals. Mammals provided skins, furs, tools and many other by-products of aesthetic and practical value. Insects were often eaten. Beetles, grasshoppers, locusts, crickets, ants and caterpillars were consumed, as well as most eggs and larva. Historic documents indicate that several hundred plants were used by the Indians of the Great Basin for medicinal purposes, fiber sources and food. The Native people of the Great Basin, who practiced the ancestral lifeways into the 19th century were heirs to an extremely ancient cultural tradition with a technology both effective and efficient, with many multi-functional, light-weight and expendable tools.

Exploration into this area during the Historic period began with the expeditions of John Jacob Aster, after he heard the stories from the Lewis and Clark Expedition of 1804_1806. The first written observations of southeastern Oregon can be found in journals kept by men involved in the expansion of fur trapping territory. Trapping occurred along the major and minor tributaries in the area: Owyhee, Snake, Malheur, North Fork Malheur and South Fork Malheur Rivers. The era of the fur trade provided the basis for American families to travel west. For Native Americans, increased use of the Oregon Trail burdened grazing resources, killed off game, and displaced resident bands.

Prehistoric use of the area is documented by the presence of camping sites, lithic scatter sites of tool-stone and grinding stones where giant wildrye, Indian ricegrass or other native grains are present.

Cultural resource surveys conducted in adjacent areas have been limited to areas where surface disturbing projects have been proposed. The diverse geomorphology and perennial water sources provide habitat for a variety of floral and faunal species that would have been attractive to Native Americans and settlers alike.

3.9 Riparian Values

Although the primary management objectives to improve riparian habitat listed in the Southern Malheur Rangeland Program Summary are limited to a number of exclosures (Dry Creek Riparian, Kane Springs

Reservoir, Sponge Spring, Flowing Wells, DM Spring, Freezesum Reservoir, and DM Reservoir), management for riparian resources has been implemented at a number of additional sites. Management actions to enhance or protect riparian resources and associated values in these pasture have been implemented cooperatively with the livestock operator on a site specific basis. Management of riparian resources associated with Lone Willow Creek and adjacent streams within North and South Rock Creek was implemented with early spring only grazing identified in the 1999 allotment management plan.

3.10 Climate/Topography

Nyssa Allotment is composed of rolling hills and steep talus slopes where the elevation above sea level ranges from approximately 2400 feet at the northeast end of the allotment in Rock Creek Riparian Stream Exclosure (Owyhee River) to 4300 feet at the top of Grassy Mountain. Semi desert shrub steppe vegetation communities result from cold winters and hot dry summers. The long term average annual precipitation is between ten and twelve inches, dependent of elevation, aspect, and typical storm tracks. Precipitation occurs primarily as snow fall during the winter with occasional mid summer thunder storms. Climate and topography would not be affected by the proposed action or the no action alternative.

3.11 Other Mandatory Elements

The following mandatory elements are either not present or would not be affected by the proposed action or alternatives:

- Air Quality
- Water Quality
- Native American Religious Concerns
- Wilderness areas and wilderness study areas
- Wild and Scenic Rivers
- Hazardous Wastes
- Prime or Unique Farmlands
- Wetlands/Flood Plains
- Environmental Justice
- Actions to Expedite Energy-Related Projects (Executive Order No. 13212 of May 18, 2001)

4 Environmental Consequences

This chapter is organized by alternatives to illustrate the differences between the proposed action and the no action alternatives.

4.1 Proposed Action Alternative

Consequences of implementing the proposed alternative; redevelopment of water collections systems, installation of pipelines and relocation of troughs, and fence construction to exclude livestock from riparian communities at Shellbark and Oxyoke springs would result in the following anticipated consequences.

4.1.1 Vegetation, Soils and Watershed

Proposed redevelopment of water collections systems, installation of pipelines and relocation of troughs with return of overflow to the stream channel, and fence construction to exclude livestock from riparian communities at Shellbark and Oxyoke springs would result in direct impact to vegetation communities primarily dominated by cheatgrass, and other annual species as a result of soils disturbance required to redevelop livestock watering facilities. Additionally, cattle concentration adjacent to trough placed down-slope from their current locations would relocate the immediate area around troughs impacted by cattle during watering. It is anticipated that with adequate water storage capacity, the duration of time spent at

troughs associated with these two springs would be reduced. Implementing mitigating actions to limit soils surface disturbance associated with fence construction to the immediate location of brace structures and fence posts, with clipping of shrubs as necessary to stretch wire, would avoid unnecessary vegetation and watershed impacts. Some disturbance of soils and vegetation may occur to reroute the existing two-track road around the construct livestock exclosure on the south side.

Impacts to soils and watershed values would be minimally changed from those which have occurred in recent years, as analyzed in Appendix R of the SEORMP, since neither the season nor the intensity of livestock use would be changed. The potential for localized soil compaction in areas adjacent to trough and associated loafing areas is anticipated to be decreased as identified above due to a reduction in time necessary for cattle to water.

4.1.2 Special Status Plants

Special status plant species would not be affected by the proposed actions. Recent and timely field inventories of areas surrounding the sites of proposed spring reconstruction, trough relocation and exclusion fence construction did not find any special status plant species or unique habitats.

4.1.3 Noxious Weeds

Ground disturbance and dispersal of noxious weeds and undesirable species is anticipated to be little changed with proposed changes to livestock watering facilities at Shellbark and Oxyoke springs. Since cheatgrass and other annual grass and forb species dominate the upland areas adjacent to proposed locations for trough placement, relocation of impacts from livestock concentration around water trough down-slope of the existing troughs would not increase or change the dominance or distribution of noxious weeds. The need for periodic surveys and treatment of sites invaded by noxious weed species would be unchanged.

Traffic and ground disturbance during construction and maintenance of the watering facilities would slightly increase risk for dispersal of weed seed and other undesirable plant materials along roads and routes of access as well as the area of project construction, providing sites for new weed establishment. The anticipated increase in noxious weed presence or dominance due to water system construction or maintenance is small with limited cumulative consequences when added to existing threats.

4.1.4 Livestock Grazing

Established levels of livestock grazing use within Nyssa Allotment would be unchanged with implementation of the proposed actions. Exclusion of livestock from riparian vegetation communities down-stream of Shellbark and Oxyoke springs, and associated upland vegetation also excluded, would reduce forage availability by an insignificant amount. The availability of clean water for livestock use would be improved with livestock excluded from impacted riparian communities. Seasons of livestock use and implementation of grazing schedules defined within the 1999 allotment management plan would be unchanged. Livestock operators would continue to be responsible for maintenance of Shellbark and Oxyoke spring developments, with additional responsibility for maintenance of the newly constructed exclusion fencing. Livestock exclusion from riparian communities would improve opportunities to meet proposed land use plan objectives and regulations associated with standards of rangeland health and guidelines for livestock grazing (43 CFR 4180).

4.1.5 Wildlife

Negative impacts to wildlife would be minimal as a result of constructing the proposed exclusion fencing and pipeline extensions with relocation of watering troughs. The potential for wildlife entanglement in additional fences would be increased, although offset by improved water quality and riparian vegetation

habitats quality when livestock impacts are removed. Potential for additional late season water for wildlife species would be increased with a constant flow of water to relocated troughs.

Sage grouse have complex life histories and often require large home ranges to survive. Other than the location of leks, there is no information in BLM files concerning sage grouse habitat use in this allotment. Proposed changes to livestock watering facilities at Shellbark and Oxyoke springs are not anticipated to affect habitat quality negatively or positively other than exclusion of livestock from riparian vegetation communities may improve associated meadow communities and their habitat quality. Fences, especially to small enclosure proposed at Oxyoke Spring could increase accidental injury and death should sagegrouse fly into them when approaching or leaving riparian communities.

4.1.6 Fisheries and Aquatic Species

Since Lone Willow Creek and the seepage at Oxyoke Spring do not support fisheries, nor do they supply stream flow other than short term with spring runoff to fish bearing streams, proposed actions are not anticipated to affect fisheries. Aquatic species associated with the springs and minimal seasonal stream flow may be marginally affected by additional dewatering of the channel flow as water is diverted to the relocated and maintained troughs. Exclusion of livestock and their physical impact to riparian communities should improve water-quality and habitat value for aquatic species.

4.1.7 Recreation and Visual Resources

Recreation values would be little changed by the proposed reconstruction of both springs with pipeline extension, trough relocation and livestock exclusion. Visual impacts resulting from proposed actions would be consistent with the management objectives for VRM Class IV. Visual impacts from disturbance of vegetation and soil resources would be minimally changed from existing conditions on public lands as a result of fence construction, burying the extended pipeline, trough relocation, and development of an alternate area adjacent vehicle access around the enclosure.

4.1.8 Cultural Resources

Cultural resources would not be affected by the proposed actions. A Class III cultural resource survey of the area of the proposed development and trough relocation has been completed. No cultural resources were located at Oxyoke Spring, surveyed prior to the Kern Fire rehabilitation project. Mitigation for the small site located at Shellbark Spring would be completed by enclosing the site within the proposed fence enclosure

4.1.9 Riparian Values

As identified above, riparian resources adjacent to Lone Willow Creek and seeps below Oxyoke Spring have not been inventoried nor has an assessment of proper function of any identified riparian resources been completed. Proposed actions would create no new impacts to any unidentified riparian values. As identified in the BLM technical reference “Grazing Management for Riparian-Wetland Areas“, positive consequences of the proposed actions include the removal of physical livestock impacts to banks and stream channels as well as retention of above ground and below ground vegetation matter which stabilize stream banks and protect positive values of riparian communities. Additionally, removal of livestock impacts would allow natural succession within riparian vegetation communities to attain late seral species which benefit riparian function and resource values associated with healthy riparian communities. Return of water overflow from trough to the stream channel would avoid the relocation of water to new channels and the development of new bog holes adjacent to troughs.

4.2 No Action Alternative

Consequences of implementing the no action alternative, retention of Shellbark and Oxyoke springs developments with livestock access to water sources and down stream riparian communities as constructed in 1943 and in 1967 respectively, would result as summarized in the following sections.

4.2.1 Vegetation, Soils and Watersheds

The no action alternative would not affect vegetation resources in ways other than are currently occurring. Upland management objectives identified in the RPS would continue to be met, although localized areas of livestock concentration, primarily adjacent to water sources such as Shellbark and Oxyoke springs, would hold vegetation communities in less than desired conditions.

The no action alternative would continue to affect soils and watershed values in ways which are currently occurring with livestock hoof action breaking down banks and compacting streambeds and upland sites where livestock concentrate.

4.2.2 Special Status Plants

The no action alternative would continue to affect special status plant species as has occurred since implementation of the 1999 revisions to the AMP.

4.2.3 Noxious Weeds

The no action alternative would not change noxious weed distribution or dominance in ways other than are currently occurring. Localized soil disturbance and existing vectors of distribution of noxious weed plant material, including those associated with livestock grazing, would continue. The need for continued surveys and localized treatment would continue.

4.2.4 Livestock Grazing

Livestock management in Nyssa Allotment would continue as defined in the revised allotment management plan dated 1999, pending completion of assessment of standards and guidelines and evaluation scheduled within the next few years. No change in levels or seasons of livestock use would occur in the short-term.

4.2.5 Wildlife

Wildlife habitat values would remain unchanged with no additional direct impacts to wildlife species. Potential benefits from riparian improvement associated with removal of livestock impacts during mid-summer adjacent to Lone Willow Creek and the unnamed drainage below Oxyoke Spring would not be realized. Potential adverse impacts to big game and sagegrouse caused by additional fencing would be avoided.

4.2.6 Fisheries and Aquatic Species

As above, fisheries are not present within the project area and off site impacts are not anticipated. Mid-summer grazing use of pastures containing riparian resources would continue to have a localized impacts to aquatic species habitats in areas of livestock concentration during scheduled grazing use. Those types of impacts are summarized in Appendix R of the SEORMP.

4.2.7 Recreation and Visual Resources

The no action alternative would retain current recreation opportunities and visual resources quality. Vehicle access on the existing two-track which parallels Lone Willow Creek would continue uninterrupted and in the existing location.

4.2.8 Cultural Resources

The no action alternative would not affect cultural resources in ways other than are currently occurring. Existing direct impacts to cultural resources from livestock concentration of indirect exposure of cultural materials would continue at the current rate.

4.2.9 Riparian Values

Mid-summer grazing of pastures containing potential riparian resources would continue to have localized impacts to those public land values in areas of livestock concentration. Livestock impacts to stream banks and channels would continue to impair water quality and associated values of healthy riparian vegetation communities. Assessment of rangeland standards and guidelines scheduled for 2004 will identify which portions of drainages in the vicinity of these two springs support riparian vegetation communities. Subsequent identified revisions to existing management practices would result in improved riparian condition. Potential impacts to riparian values from hot season livestock use are summarized in Appendix R of the SEORMP.

5 Adverse Effects

Unavoidable adverse effects from implementation of the proposed or no action alternative are limited to those impacts to soils, vegetation and riparian function described in the text above.

6 Short Term and Long Term Impacts

Short-term impacts to vegetation resources during construction of permanent fencing to exclude livestock from riparian communities and extension of pipelines would be offset by long-term benefits to riparian resources including water quality and timing of discharge, wildlife habitat, and watershed stability associated with improved riparian function. No short-term or long-term change of grazing use and subsequent impact to local or regional economies is anticipated as a result of the proposed action or no action alternatives.

7 Irreversible or Irretrievable Commitment of Resources

In the event that implementation of the proposed actions are found to not meet current land use plan objectives, objectives identified in the Proposed SEORMP, or Standards for Rangeland Health and Guidelines for Livestock Grazing, existing grazing schedules or revised grazing schedules could be implemented with no irreversible or irretrievable loss of resources. Similarly, should the proposed fence not function as expected to protect riparian resources or should it have unforeseen negative impacts, it could be removed or redesigned with no irreversible or irretrievable commitment of resources.

8 Mitigating Measures

Based on BLM staff input, the following mitigating actions would be implemented to minimize undesired negative impacts of implementing the proposed action:

- All equipment used to reconstruct the spring box, install troughs, and to lay proposed pipeline would be power-washed prior to movement to the project site to avoid introduction of undesired and noxious weed species.
- In accordance with guidance provided in BLM Technical Reference 1737-17, "A Guide to Managing, Restoring, and Conserving Springs in the Western United States" and the Proposed Southeastern Oregon Resource Management Plan and Final Environmental Impact Statement, any reconstruction of water collecting facilities at Hobo Spring would not attempt to dewater the spring source, but provide for some water to continue to naturally flow on the surface and subsurface to maintain proper hydrologic function.

9 List of Preparers

Steve Christensen	Rangeland Management Specialist
Ron Rembowski	Rangeland Management Specialist
Tom Hilken	Rangeland Management Specialist;
"	Planning and Environmental Coordinator
Jim Johnson	Wild Horse Specialist
Bob Alward	Outdoor Recreation Planner, Wilderness
Jean Findley	Botanist
Diane Pritchard	Archaeologist
Shaney Rockefeller	Hydrologist/Soil Scientist
Al Bammann	Wildlife Biologist
Cynthia Tait	Fisheries Biologist
Lynne Silva	Range Technician, Weeds
Jon Freeman	Realty Specialist
Tom Dabbs	Field Manager, Malheur Resource Area

9.1 List of Agencies, Organizations, and Persons to Whom Copies of the EA are Sent

Livestock operators; Nyssa Allotment
Western Watersheds Project; Interested Public
Northwest Environmental Defense Center, Interested Public
Walt Van Dyke, Oregon Department of Fish and Wildlife
Albert Teeman, Tribal Chairperson, Burns Paiute Tribe
Edward Potaws, Chairman, Confederated Tribes of the Umatilla Reservation

A file search completed February 14, 2003, identified no additional requests by members of the public to be considered an interested public for Nyssa Allotment.

9.2 Literature Cited

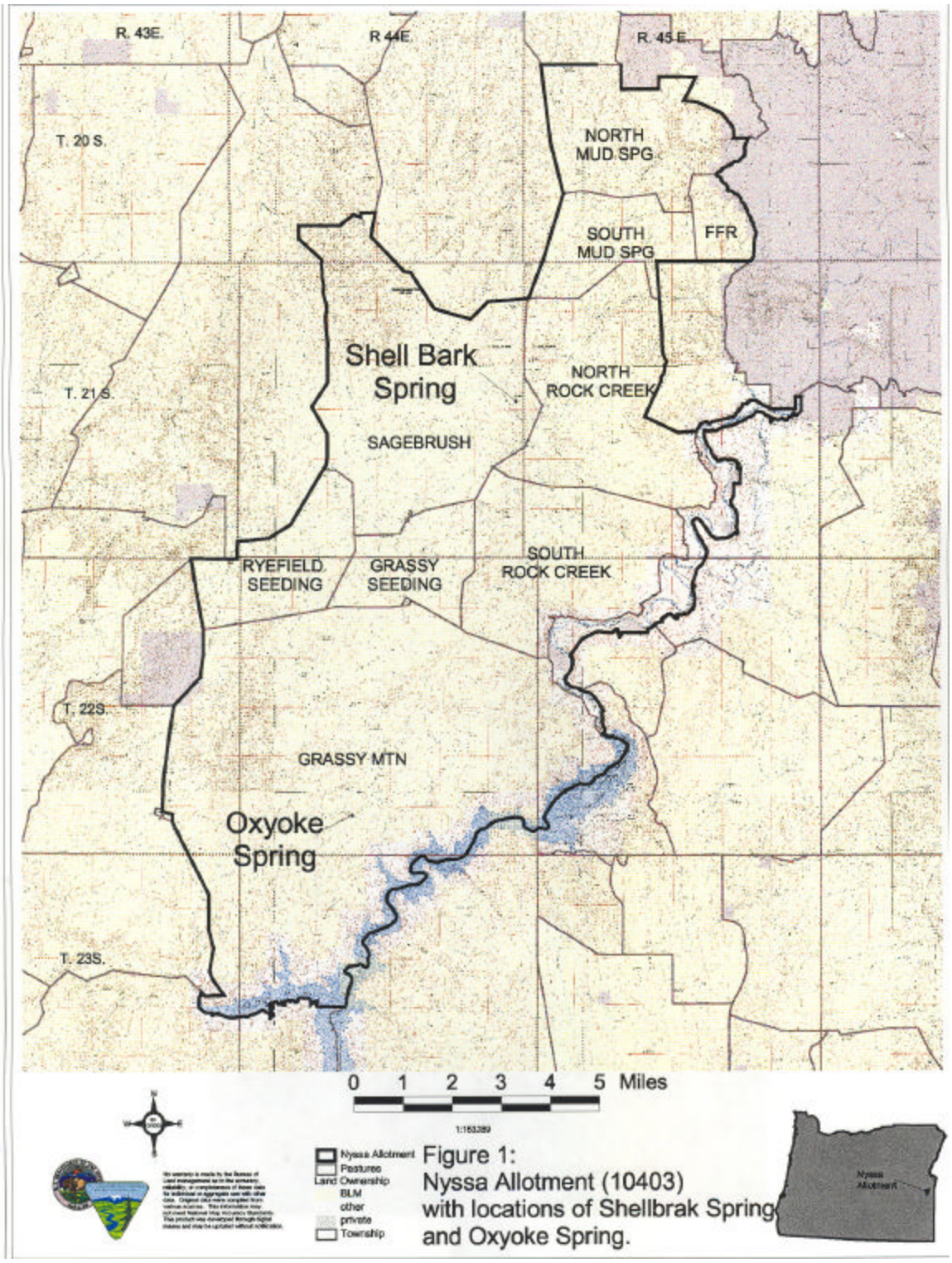
USDI-BLM 1984. Southern Malheur Rangeland Program Summary (RPS). U.S. Bureau of Land Management, Vale District, Oregon. 24 p.

USDI-BLM. 1997. Grazing Management for Riparian-Wetland Areas. U.S. Bureau of Land Management Technical Reference 1737-14. Denver, Colorado. 63 p.

USDI-BLM. 2000. Proposed Southeastern Oregon Resource Management Plan and Final Environmental Impact Statement (April 2001). U.S. Bureau of Land Management, Vale District, Oregon. 3 v.

USDI-BLM 2001. Biological Soil Crusts: Ecology and Management. U.S. Bureau of Land Management Technical Reference 1730-2. Denver, Colorada. 110 p.

USDI-BLM 2001. A Guide to Managing, Restoring, and Conserving Springs in the Western United States. Technical Reference 1737-17. U.S. Bureau of Land Management. Denver, Colorado. 70p.


R. 43E.
R 44E
R. 45 E.
T. 20 S.
NORTH MUD SPG.
SOUTH MUD SPG
FFR
Shell Bark Spring
NORTH ROCK CREEK
T. 21 S.
SAGEBRUSH
RYEFIELD SEEDING
GRASSY SEEDING
SOUTH ROCK CREEK
T. 22S.
GRASSY MTN
Oxyoke Spring
T. 23S.
0 1 2 3 4 5 Miles
Nyssa Allotment
Pastures
Land Ownership
BLM
other
private
Township
Figure 1:
Nyssa Allotment (10403)
with locations of Shellbrak Spring
and Oxyoke Spring.

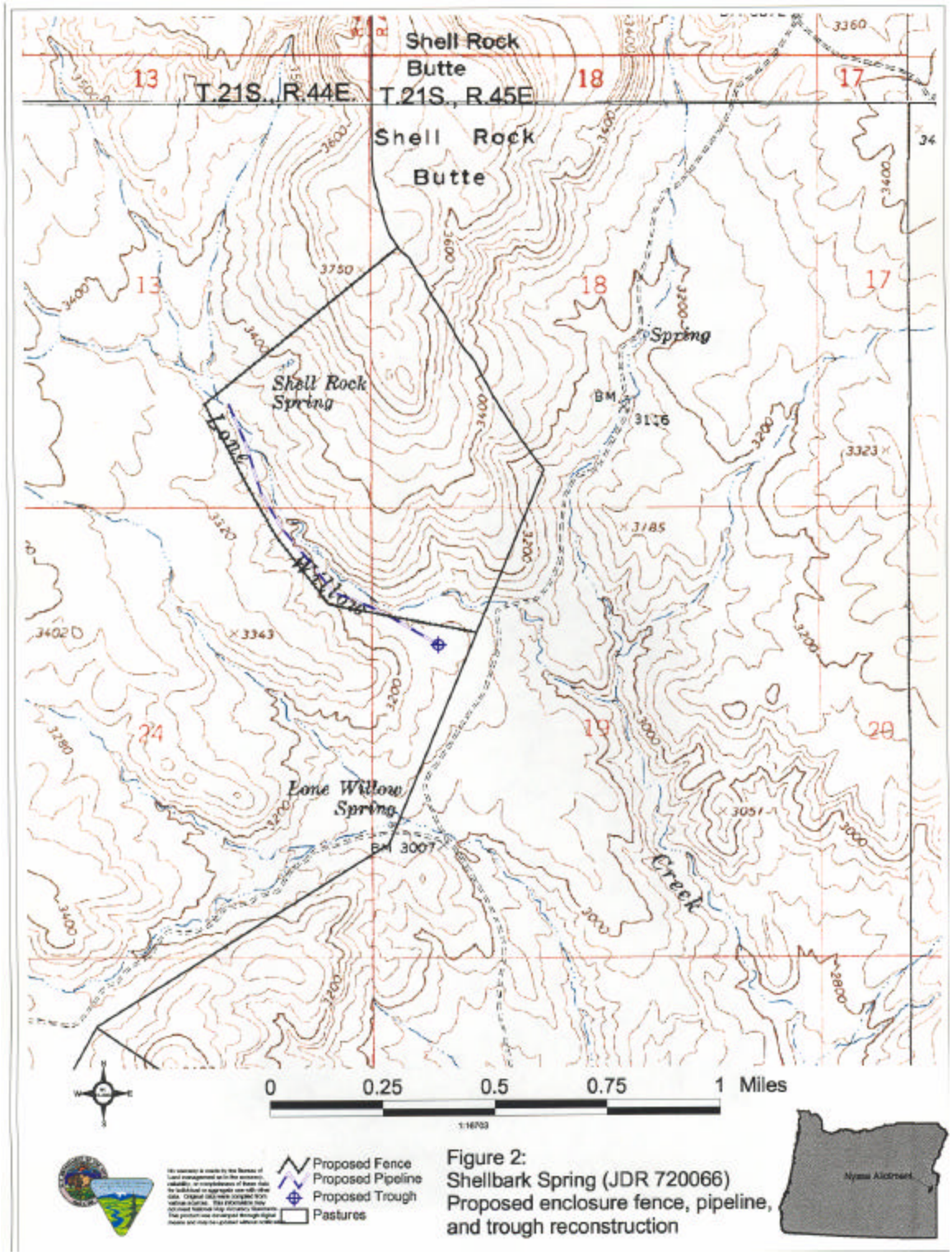


Figure 2:
Shellbark Spring (JDR 720066)
Proposed enclosure fence, pipeline, and trough reconstruction

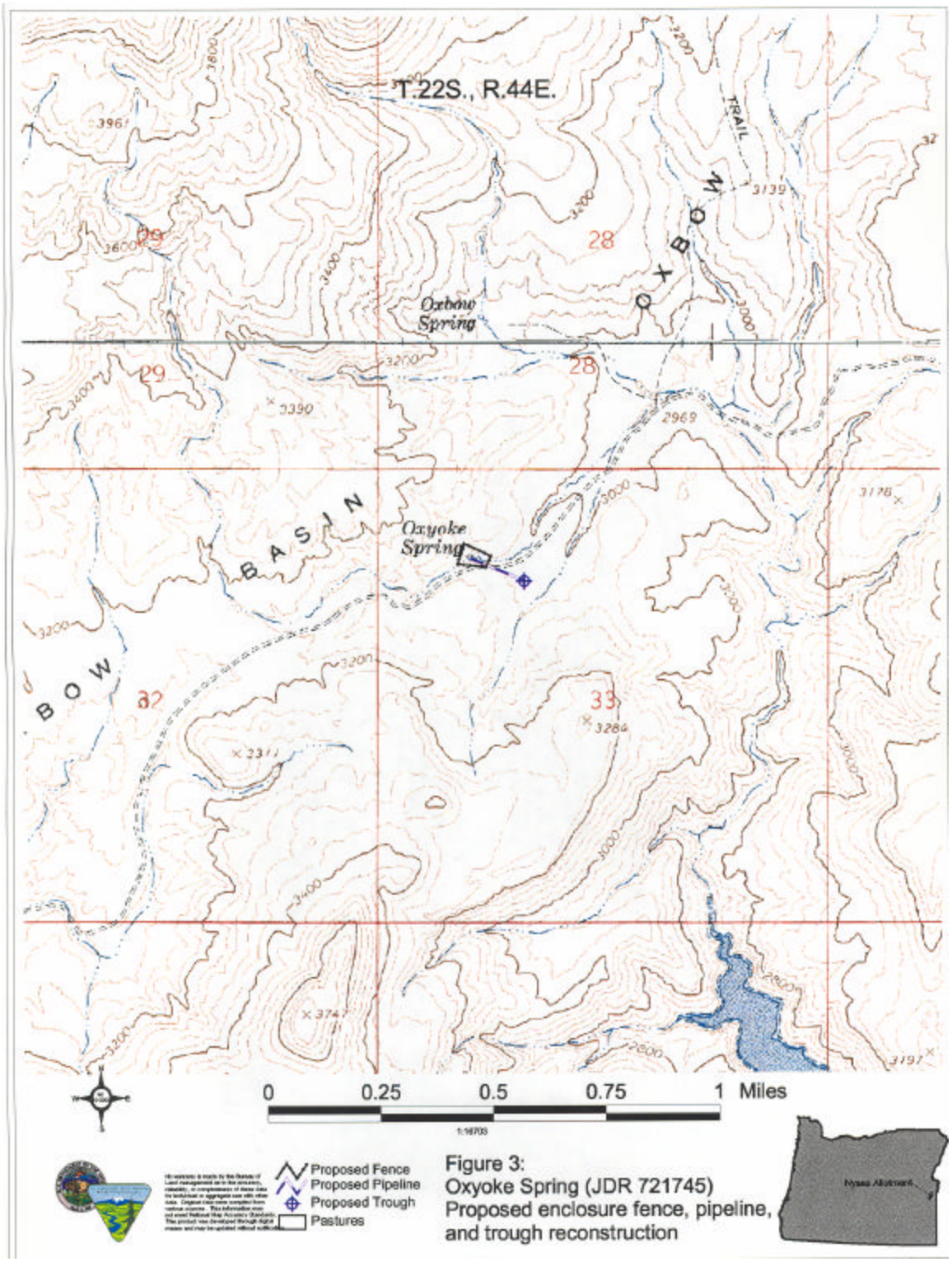


Figure 3:
Oxyoke Spring (JDR 721745)
Proposed enclosure fence, pipeline, and trough reconstruction